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Contents

VOL. XXXI. No. 5, MAY, 1953

Abuse of Antibiotics
—Editorial.
Polemics of Pressure Cooker
Sexual Disturbances
Tobacco and Cancer
Infant Feeding

Price FOUR Annas.

EDITED BY U. VASUDEVA RAU, M.B., B.S.

What's New in the News?

Tablets for Birth Control

A tablet taken by mouth was successful in preventing childbirth in 298 out of 300 couples who participated in an experimental project, Dr. Benjamin F. Sieve of Boston reports in ' Science." All couples previously had given birth to at least one child. After three to thirty months, 220 couples stopped taking the tablets and then conceived within three months. The tablet is made of phosphorylated hesperidin used in the past to counteract hæmorrhage. The ability of the male sperm to penetrate an ovum depends largely on the enzyme hyaluronidase. Hesperidin, counteracts this enzyme and blocks fertilization. The tablets must be taken three times a day by the husband and four times daily by the wife.—(*Herald of Health*, April 1953).

Let baby teeth alone

Dr. Harold R. Klein of the New York University while addressing a meeting of the New York Society of Dentistry for Children, referred to the prevailing practice of premature extraction of milk teeth in the children, which he considered, was responsible for fifty per cent of all dental trouble in adult life. He declared that this unnecessary interference with the baby teeth caused malformation of the permanent teeth and was responsible for numerous other dental troubles in later life.—(*Good Health*, U.S.A. 88, 2, 1953).

Television Risks

"Children, especially those under five, should not be allowed to spend too much time looking at television", says Miss Mildred C. Summer. She was addressing the New York Safety Council. She suggests a small lamp lighted behind the apparatus to relieve the eye-strain. She also warns that an expert mechanic skilled in Television sets, should be called in if the set gets out of order. Amateur tinkering might casue a shock of from eight to thirty thousand volts, enough to cause death. There is also the danger from fire.—(*Good Health*, Feb. 1953).

How young am I ?

Most people like to believe that old age begins about 10 years beyond their current age. The teen-ager plans to be "old" at 25; the matron at 55 is resigned to the fact that at 65 she will have to accept the classification of "oldster". A comprehensive survey made to obtain a more satisfactory answer to this question showed that a majority of the people who were questioned, felt that 49 marks the entrance to old age.—(*Virg. Med Monthly*, 79, 1952).

The moment to smack a child

Every child should be smacked at least once in its young life if it is to achieve the right kind of moral responsibility, Dr. E. R. Matthews, Chairman of Bath Marriage Guidance Council, told the Conference of Educational Associations

But, he added, the smacking must be well timed. "You must wait for the moment when it pits its whole self against all authority and give it a good hard smack. You may give it a proper sense of moral responsibility for the rest of its life. It may only be necessary to smack the child once."—(*The Mail*).

Swayamvara in Bihar Village

People inhabiting the small village of Pratapgarh had a glimpse into the social custom prevailing in the country centuries back when a girl was given the choice to select her life partner in a "Swayamvara Sabha". In the presence of a large gathering, the girl, Harijan by caste and well-educated, made her choice from among a number of young men. The girl garlanded a Brahmin youth —*UPI*.

Shock made them forget

A number of British university students were given a list of words to memorise, which they did without much difficulty. Then without warning, the light went out, a revolver was fired, a sheet of old iron fell to the floor with a shattering noise. To cap it all the backs of their chairs fell off and the arms became electrified. The result ? Most of the words the students had just learned were forgotten.

Similar experiments have shown repeatedly how important emotional upsets are where memory is concerned.—(*The Mail*, 3-1-'53).

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EXPERTS ADVICE AGAINST ABUSE OF ANTIBIOTICS

Our readers are aware of the fact that a team of distinguished top-ranking medical scientists from eight different countries of the world, recently visited Madras and Bombay and spent nearly a month in each city, delivering lectures, initiating discussions, visiting medical institutions and demonstrating highly skilled operative techniques in thoracic, abdominal and other surgery. Sir Alexander Fleming, the discoverer of Penicillin and Nobel prize winner, in a talk with pressmen warned that doctors must make a proper use of the wonder-drugs of the age and guard against their abuse. Pleading for great caution, he said, "The preventive aspect is more complicated. If you use lozenges for prevention of sore throats, then you may become sensitive yourselves to the antibiotic and it upsets you and you cannot take it any more. But, if you use these things sensibly, then they do good. The point is, there should be no abuse. That is most important."

Dr. Karl Evang, Vice-Chairman of the W.H.O. team also cautioned the profession against the indiscriminate use of the wonder-drugs like streptomycin, while speaking at a seminar organised by the faculty of Medical Sciences of the Delhi University in March last. He said, "A very high degree of responsibility should be established in those who use the new drugs. It is not the task of every doctor to find out a patient who has tuberculosis and treat him with streptomycin. But it is the duty of the doctor to find out whether it is the right time in that patient's life to be treated with that drug."

Continuing Dr. Evang said that if the right time to use the drug was not selected, the patient would lose his only chance in his life of being treated by streptomycin because it would result in the breeding in him of bacilli, resistant to streptomycin treatment.

Favouring the setting up of cheap hospital beds in the rural areas instead of costly clinics in urban areas, Dr. Evang called for a "crusading spirit" in fighting a disease like T.B. "Before you start a programme," he said, "it is most important to bring into the picture all interested parties—Government, public health administration, voluntary agencies, representatives of faculties of medicine and representatives of medical and nursing professions."

The duty of the doctor is therefore, clear. He should not empirically push Penicillin, or other antibiotics into the patient, regardless of whether there is imperative need for the drug. He should remember that in using these wonder drugs, he is using a valuable but at the same time a potentially dangerous medicine, and that he should reserve it for use as a trump card in an emergency. The unfortunate practice of injecting Penicillin, even for little minor ailments, like a sorethroat, is daily on the increase, and recent literature published in America and Europe contains timely warning of serious untoward results following the promiscuous and indiscriminate use of the antibiotics.

Bacterial resistance does not simply mean that the particular patient does not react to the continued use of the antibiotic, it also connotes, particularly in tuberculosis of the lungs, that the patient who has become resistant to the antibiotic, will be a potential source of danger to the community, as he will be a focal reservoir of the resistant germs which, when disseminated to others will induce a tuberculous condition not amenable to treatment, even by the orthodox methods: In other words, instead of the disease being controlled, it will spread.

Both doctor and patient should therefore, take note of these dire possibilities following the misuse and abuse of antibiotics, and exercise due care and circumspection in making use of these double-edged weapons. We know many doctors use them, even when they are not urgently or at all required, because the patients demand quick results, being in most cases ignorant or unaware of the possible risks, sequelæ and repercussions. This is indeed a most regrettable development in the history of modern medical achievements and practice and should be halted at any cost. Readers will do well to see page 100 of this issue.

If there is righteousness in the heart there will be beauty in the character. If there be beauty in the character, there will be harmony in the home. If there is harmony in the home, there will be order in the nation. When there is order in the nation, there will be peace in the world.—Chinese proverb, quoted in *Sunshine Magaizne*.

The Polemics of the Pressure Cooker

Lt. Col. CLARKE, M.R.C.S.,
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General.—Nearly 300 years ago a Frenchman invented a machine "for dissolving bones and for use in cooking" which consisted of an air-tight vessel that could be filled with steam under pressure, regulated by a safely valve. The machine was a clumsy affair, accidents occurred and pressure cooking remained neglected. Of recent years much laboratory research has been done in various countries, and the principles underlying pressure-cooking have come to be better understood. The vessels have also been streamlined and made easy to handle.

The Principles of pressure-cooking:—One commonly hears discussions and reads reports on the advantages and disadvantages of pressure-cooking. When water is heated in an air-tight vessel, the steam creates pressure, which in turn forces the temperature up. Steam at 15 lbs. pressure raises the temperature to 250 or 38°C. The higher the temperature the quicker does food cook; thus in a pressure cooker food is more rapidly cooked than in ordinary oven-cooking. It takes only a quarter of the time with a pressure-cooker, to reach the cooking temperature as compared with open fire cooking; this naturally leads to a saving of fuel and time, and moreover, the colour and flavour in many foods is conserved as a result of the rapid cooking. But it is important to take notice of this small time margin, as it is possible to overcook.

Proteins and carbohydrates are equally affected by heat; starches however, are rendered more digestible when cooked under pressure. Some proteins are water-soluble, and get washed out by repeated washings when they are to be cooked on an open fire. In a pressure-cooker however, this loss is not so marked because not much water is used and the time taken is shorter.

The main objection to pressure-cooking is the loss of vitamins and mineral salts. These losses do occur no doubt, but they occur no less in cooking on an open fire. The loss of some of the vitamins in cooking is inevitable, under any scheme or process of cooking.

Losses of nutrients depend on four factors:—(1) Their solubility in water; (2) the temperature to which the food is subjected; (3) the time taken to reach the cooking temperature; and (4) exposure to air-oxidation.

Certain proteins, Vitamins B and C, and mineral salts are all water-soluble. As less water is used in a pressure-cooker, this source of loss is largeiy avoided. Vitamins B and C are also unstable to heat. Research has shown that it is the length of time taken in cooking at temperatures above 275°F. that counts in the destruction of vitamins. The more quickly the cooking is finished the less the loss of vitamins. Pressure-cooking

speeds up cooking temperature and shortens the duration of cooking and thus helps in vitamin conservation. The length of cooking time is an important factor affecting the palatability of any food. The longer a food is cooked the greater is the destruction of vitamins B and C. Exposure of foods to air also leads to the destruction of vitamins B_1 and C and of carotene (the precursor of vitamin A). This is why it is important to peal, slice and prepare food immediately before cooking; it is also the reason why pressure cooking results in smaller nutrient losses by oxidation.

Under laboratory conditions, it has been shown that, other things being equal, the conservation of vitamins is greater (between 9 and 20%) in pressure-cooking, than in open fire cooking. The only snag in pressure cooking is that it requires great attention and particular care to avoid over-cooking; for certain foods tend to disintegrate and spoil by over-cooking. The truth is that the pressure-cooker like the *chula* turns out food that reflects the skill and understanding of the cook. All that is needed is to understand the principles correctly and adopt the technique that suits best.

Use and Abuse of Antibiotics

An editorial in the *Practitioner* of London for March 1952, deals with the use and abuse of antibiotics and offers wise counsel to the practitioner and patient. "The swing of the pendulum from the therapeutic nihilism of thirty years ago, to the excessive and indiscriminate therapy of the present day, has now reached such a stage that action is clearly required in order to restore a sense of balance. The arguments in favour of indiscriminate antimicrobial therapy of diseases which are presumed to be infectious in origin, are listed as follows:—(1) quicker recovery; (2) fewer pyogenic (pus forming) complications; (3) toxic effects are relatively few; (4) patients or their families demand that the so-called wonder-drugs be prescribed or the physician assumes that they are favourably impressed when these drugs are prescribed. The arguments against such indiscriminate therapy are:—(1) the economic loss, as the benefits to the patient seldom justify the expense involved; (2) it has a detrimental effect on the layman, either making him falsely dependent upon a therapeutic agent or making him sceptical of all therapeutic measures; (3) the risk of producing bacterial resistance to the available antimicrobial agents; (4) it definitely results in a less critical attitude on the part of the doctor toward diagnostic and therapeutic endeavours; (5) the increasing tendency for such therapy to produce suppression, rather than cure, of the disease, with resulting chronicity of the disease and even a fatal termination; (6) 'there are no substantial data to indicate that the serious consequences of pyogenic complications cannot be avoided by appropriate therapy instituted at the onset of their clinical appearance in infections which are initially viral in origin'. These arguments against indiscriminate antimicrobial therapy 'far outweigh those in favour of it'.

The time has come when the practitioner must begin to re-exercise his clinical acumen and start to use antimicrobial therapy with that critical faculty which was instilled into him as a student.

"The premium is and will continue to be on good clinical judgement."
—(Editorial, *Practitioner*, Mar. 1952).

The Psychology of Sexual Disturbances

(II)

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In my last article on this subject, I told you about the imperative necessity for imparting correct sex education to all our young boys and girls in order to enable them to understand the true nature, development and functions of sex and sex-life. Also I related certain facts, with illustrative examples, relating to a serious but common functional trouble *viz.*; frigidity or the absence of sexual desire in women, and showed that the fundamental cause of the trouble in most cases had a psychological basis, born of fear or hatred for, or of cruelty, want of love and sympathy in the man. An insight into certain crucial facts relating to our sex nature and development is therefore, essential. Unless we consider the individual man or woman as a whole and their maladjustments and frustrations are taken into account, there can be little hope that sex education *per se* will be productive of lasting results in the matter of teaching the correct sexual behaviour. Sexual misbehaviour, as we all know, is the basic cause for many venereal diseases and also for delinquencies, both juvenile and adult.

Sex, which is God-given, should develop as Dr. F. C. Kuether has stated, along regular and observable stages The sexuality of the child is different from that of the adolescent who is interested in and is exploring for the first time a new quality of relationship with a member of the opposite sex. And the sexuality of the adolescent is different in quality from that of the mature adult who establishes a home and has children. The general developmental phases apparently apply to all individuals in spite of individual variations in quality and quantity.

The first fact we should therefore, visualize is that our sexuality is born with us and is part of us; it does not spring into our lives mysteriously all of a sudden at a later date. It is present from the very beginning and colours our earliest strongly-felt relationships to our parents, brothers, sisters and our friends and relatives. Sexual jealousies and attachments are part of the emotional experience of even very young children. If they are mishandled, punished or severely chastised at this stage, they become potential sources of guilty-feelings, hostilities, and suppressed evil desires. All later relationships will be tinged and distorted by these experiences which will be lodged in the unconscious.

A second fact to know and profit by, is that our sex nature goes through certain normal stages of development before reaching

maturity. But psychic and emotional disturbances such as those detailed in the preceding paragraph, may arrest the normal progress, growth and development at any of these stages. It is well known that small children go through a period of possessive attachment to the parent of the opposite sex. This initial experience is the source of many unresolved conflicts that later abide in the unconscious. Most parents—particularly in our country—are not aware of and do not care to understand the child's inner conflicts, which are often subconscious. Growing children pass through a period of normal 'homosexuality', which at their age is to be deemed innocent; girls like girls at this age and dislike boys; boys like boys and have no patience with the fooleries and foibles of girlhood. If they are not weaned from such feelings of unresolved guilt, they will grow to an adulthood, not dissimilar to their childhood of psychological homosexuality. The girl will grow up to womanhood with a deeply ingrained feeling that men are crude and filthy-minded and the boy will grow into a man who despises all women and feels joyful and happy only in the company of men! Such immature adults can be counted in hundreds in our society.

Adolescence, which comes next is a more difficult time. Glandular and other body changes are taking place with a remarkably distracting rapidity accompanied by mental and emotional changes. "A flouting of sex standards becomes one of the practical methods adopted by the adolescent to assert his or her independence." Relationships to members of the opposite sex are not steady. Their objects of admiration and condemnation vary within wide limits and they are very unsteady at this stage. *The basic criterion* to judge sexual maturity in an adolescent who is on the road to adulthood, is to find out if he courageously "accepts his own sex-nature without a feeling of guilt, if he incorporates that nature, in a rational life-plan, and if he is able to make sexual experience the basis of a sustained, *mutually* fulfilling and creative relationship with the opposite sex."

Yet another fact as regards our sexual behaviour, which is only just beginning to be recognised by thoughtful well-intentioned persons, postulates that "sexual behaviour patterns do not rise far above or fall far below, the level of our non-sexual behaviour patterns." "Sex is one channel", says Dr. MacDonough of the U. S. Navy, "through which we express our character. We do not find, for example, that a person whose sexual behaviour is marked by a will to dominate and exploit others, is a person, who in other walks of his life, has a mature gift for equality, nor do we find that the person who regards sex as filthy has, in other respects, a fine rational power to measure the worth of things. Psychiatrists are revising some of their first estimates regarding the role of sex. They are beginning to note that, while it remains true that a traumatic (caused by a wound or injury) sex experience can so arrest development that a person's whole relationship to life will be distort-

ed, it is equally true that a traumatic experience in some other sphere of life will have a similar effect and will in part express itself through the channel of sexual behaviour" (Chisholm. *Am. Jour. Psychiat*,, 104 : 543-47). In his book "*Mature Mind*", Dr. Overstreet of U.S.A. states an axiomatic truth *viz.*, "Where the sex linkage is immature, there is no great maturity of character."

Freud assumed that sexual development determined character. Dr. Fromm of the Yale University School for Social Research, in his orientation to psychoanalysis suggests that character determines sexual behaviour. Sexual behaviour as we all know, offers one of the most distinct clues for the understanding of a person's character. We also know that the intensity to the sex desire makes sexual behaviour less amenable to a person's control. So Freud's point of view appears to me to be more realistic and rational.

Having explained the three cardinal and basic facts relating to the sex nature and its normal development, I shall now continue my observations on the other sexual disorders, listed in my previous article (p. 75 : *Health*, April 1953).

Painful or difficult intercourse and painful spasm of the vagina, (the external genital organ which plays a predominantly active part in the sex act) are disorders which when not due to some obvious physical defect in that organ *e.g.*, an imperforate or partially perforate hymen (a membranous partition at the orifice of the vagina) which have a psychological basis or may be simply due to ignorance of certain preliminaries in love-making (usually called 'love–play') on the part of the couple.

Dr. O. Spurgeon English, a renowned psychiatrist writing about man's sexual drive and how it manifests itself says that love cannot live without *sensuous arousal*, that social co-operation is impossible without physical affection, that marriages cannot flourish without physical compatibility and pleasure. "We cannot have a world," says he, "of peace without modification of our concepts regarding sexual repression." Perfectly true.

Fear in the woman arising from ignorance concerning sex, or/and a feeling of shyness or aversion to rude and abrupt advances made by an over-sexed or unsympathetic husband, particularly when she is not ordinarily well loved and properly treated at other times, may result in a spasm of the muscles of the vaginal canal (*vaginismus*) when intercourse is attempted, making it impossible to complete the act. Lack of sexual excitement, due to abrupt forcible or unrequited and violent advances from the male partner is associated with sparse or no secretions in the genital tract, and this will result in dry and very painful intercourse. It may scare away the woman for all time. Frequent douching resorted to after intercourse, by modern fashionable young women, will also cause a progressive decrease in the secretions. Douching is permissible only when the women are suffering from chronic leucorrhœa. (w h i t e s). Even in

such cases, the condition is amenable to treatment and cure by other radical measures. In some other cases however, aversion to and fear of the sex-act may cause an involuntary powerful contraction of the outlet muscles, rendering intercourse, difficult, painful or even impossible. Silverman considers that "operations designed to enlarge the outlet in these subjects may result in severe psychic damage, since by so doing one has taken away the patient's last defence against the hated and feared act." Vaginismus (spasm) may occur not only in the virgin on her first sexual meetings, but also in women who have borne one or more children and many of these women may consciously desire intercourse but not be able to realize that their difficulties are caused by unconscious emotions, fears, and hates.

Malleson (*Br. Med. Jour.*, 2: p-215, 1942) considers that in many cases of vaginal spasm and painful intercourse, "the patient *must* have experienced some kind of pelvic pain as a child. So she equates the memory of the infantile fear of a painful rectal digital examination with the fact of the entry of the penis (male organ) into her vagina."

The chemical state of the vaginal secretions as to acidity or alkalinity is also of some importance. Abnormalities of the cervix (mouth of the uterus) play an important role in the sexual disorders and act as barriers to conception. Nature has assigned to the cervix, the role of a "watchman between the outside world and the delicate internal organs to which it is the gateway." It is liable to injury as a result of bacterial infection or successive child births, during which it is stretched and sometimes torn by the passage of the baby. An eroded cervix will cause dyspareunia — pain during inter-course. Cervical infections however, will readily respond to treatment.

(To be continued).

How does the Brain Regulate the Speed of Our Breathing

Compared with some man-made machines, the arrangements by which the body ventilates itself is a poor one, for though the lungs blow air in and out, the air is by no means completely expelled at each breath, and the result is that air in the depths of the lungs is changed only very slowly. The human body has however, an almost miraculous method of adjusting the speed of breathing. In the lower part of the brain, is a centre which acts as a regulator. In some yet not fully understood way, it responds to the acidity of the blood. If the blood is more acid than usual, through perhaps the eating of certain acid foods, this part of the brain sends a message and certain nerves to the muscles of the diaphragm, which promptly starts working more strongly and sends more air into the lungs.

The fresh air entering the lungs drives the excess acid gas or carbon dioxide (produced as a result of the overwork of the digestive organs) out of the blood. The acidity of the blood in the body is thereby lowered and breathing becomes less strong. If the blood happens to be less acid than usual, that is, if it is alkaline, the brain centre sends out a message to the lungs to work less fast or more slowly; the requisite amount of carbon dioxide to make up the normal quota then gradually accumulates in the body.—(*The Hindu*-Madras).

SMOKING AND TUBERCULOSIS OF THE LUNGS

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CAN a tuberculosis patient smoke? Before answering this question I would like to place before the reader a comparative tabular statement showing the damage caused by smoking *per sė* and by tuberculosis of the lungs, to the various organs of the human body. These interesting facts are taken from various publications on the subject by eminent scientists of the world.

	SMOKING	TUBERCULOSIS
Cough:—	Is a very common trouble and is usually very chronic even from the beginning.	Is a very early symptom. At the beginning it is of the dry type and only later becomes chronic and troublesome.
Throat:—	Irritates the throat and larynx. Causes swelling of the vocal cords resulting in hoarseness of voice.	The germs affect the throat, larynx and vocal cords forming ulcers resulting in hoarseness of voice and difficulty in swallowing.
Lungs:—	Irritates the lung tissues and it has been recorded that 95% of lung cancer occurs in heavy smokers.	Damages the lung tissues with tubercle formation, followed by destruction and cavity formation.
Heart:—	Increases the pulse rate by as many as 28 beats per minute. Can produce frightfully irregular stops and jumps of the heart rhythm; a rise in the blood pressure and palpitation are common; contracts the blood vessels especially of the feet and hands; gangrene may also be set up.	Increase in pulse rate is always present with changes in blood, causing anæmia and weak heart. Palpitation is another common complaint particularly after exertion.
Digestive System:—	Causes loss of appetite, burning sensation in the stomach, gastritis and peptic ulcer. Irregular attacks of diarrhœa also often occur.	Loss of appetite, indigestion and slight dull aching pain in the region of the stomach occur from the beginning of the disease.

SMOKING—(*Contd.*).	TUBERCULOSIS—(*Contd.*).
Nervous System :—	
Mental depression, nervousness and irritability result from smoking.	Mental depression, anxiety and worry with various emotional changes are seen.
General Life :—	
Smoking definitely shortens life, as a result of the damage caused to various systems (*supra*). Smokers are not easily weaned and so kill themselves.	Tuberculosis will also do so, but with proper treatment in time, the danger can be averted.

The above comparative study shows clearly that smoking can cause damage to any system in the body just like tuberculosis of the lungs, and will predispose to tuberculosis and cancer.

Mental depression, loss of appetite, nervousness, palpitation of the heart, chronic cough, chest pain, excessive perspiration are common symptoms of nicotine poisoning caused insidiously by excessive smoking and the common symptoms caused by tuberculosis of the lungs, are very similar to the above.

When a tuberculous woman becomes pregnant and has a co-existing disease like diabetes, the prognosis is usually grave, and if a tuberculous patient is given to smoking and continues to smoke, he runs grave risks too. Rest to the diseased lung is very essential for recovery from the disease. A smoker sooner or later develops a chronic cough which shakes the lungs everytime he gets into his coughing fits, which are inescapable. This shake-up of the lungs definitely deprives them of their valuable rest and at the same time may cause a spread to the healthy lung tissues. And I am sure that this reason alone must be sufficient to make any tuberculosis patient desist from this baneful habit.

The essential point of difference between tuberculosis and smoking is :—Tuberculosis is a disease caused by minute germs called tubercle bacilli. But smoking is a habit which one acquires through his own folly, inviting trouble of a serious nature thereby. It is therefore, of one's own making through sheer perversity and callousness of misguided youth.

Therefore, if a tuberculosis patient wants to get cured and to live long, he must give up smoking altogether. As a friend and as a doctor treating patients suffering from tuberculosis of lungs for the past twelve years, my candid answer to the question set at the beginning of this article is :—No tuberculosis patient should smoke on any account as smoking is definitely detrimental to health.

A friend is one who knows all about you and still likes you.—(G. F. Hoffman in *Good Health*).

Do not let your mind dwell upon what you want and what you have not got; always fix your mind on what you have got.—(Benjamin Disraeli).

CONNEMARA 21 AUG 1955 MADRAS

TEMPERATURE OF THE BODY

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I PROPOSE to deal in this article with some of the major aspects and the importance of the variations observed in the temperature of the human body.

Man is a warm-blooded animal and his normal body temperature is nearly always constant at about 98·4°F the variation if any, being only from 98° to 99°F. It is not therefore, correct to say that the normal temperature is always 98·4°F or (37°C). During normal health few take any notice of the body temperature or its variations under conditions of rest or exercise. Its value and importance become very great in illness and variations constitute a most important clinical sign; even in normal health a record of the basal body temperature is now fast becoming a most valuable document of great significance in the evaluation of the proper time of ovulation and propitiousness for pregnancy in women. In normal health the temperature in the mouth varies from 96·7° to 99°F, and in the rectum it varies from 97·2° to 99·5°F. The temperature of the urine varies from 96·8° to 99·2°F. It also varies with the time of the day, being at its maximum in the evening. It is higher during exercise and activity and lower while at rest. A heavy meal increases the temperature; hunger may lower it. During sleep the temperature falls. Any increase in the metabolic activity may cause a rise in the temperature. Immediately after a running exercise extending over some ten to fifteen minutes, a temperature rise of as much as 3 or 4 degrees over the normal may be recorded.

Atmospheric conditions and sharp variations therein may react on the body temperature in a particular way. In a chill atmosphere the production of heat in the body is increased, in order to maintain the body temperature constant. The regulation of heat is usually effected by the energy derived from our food and by the activity of our muscles. When the production of heat is not adequate, shivering occurs in order to meet the demand. In a hot climate, the muscles become slack and perspiration is profuse. Respiration also becomes hurried in order to regulate the temperature. The main regulator of heat is however, the skin. The blood vessels of the skin dilate and allow more blood to pass through the skin; the loss of heat thus becomes greater. Perspiration cools the body by evaporation and the latent heat released from the body to aid in evaporating the sweat, exerts a great cooling effect. The extent of evaporation would depend to some extent on the humidity of the atmosphere and the circulation of the air around. We feel great comfort when the external temperature, the humidity and the movement of the air are all moderate. When the atmosphere is warm and the humidity is very high and there is lack of

movement of air, the regulation of the body temperature becomes particularly difficult, because heat loss by evaporation and radiation from the skin are seriously interfered with. Respiration becomes hurried in order to cope with the increased elimination of water vapour through the air breathed out, and thereby get rid of the heat from the body. The body temperature may rise up to 100°F. Humidity is the most depressing factor, because in a warm but dry room, no rise of body temperature occurs, whereas in a warm but moist room the clothes retain moisture and cause greater discomfort. Removing the clothes gives a feeling of slight comfort, due to the evaporation of the moisture direct from the skin. The humidity in the air and particularly the movement of the air influences the body-temperature. In a cool, but dry atmosphere, all the bodily functions are more active, and our digestion and metabolism are also stimulated.

The influence of the nervous system is also a factor not to be overlooked. The vascularity of skin, the activity of the sweat glands, the respiration, the activity of skeletal muscles, the activity of secreting glands, which are responsible for the regulation of the temperature, are all controlled by the nervous system. In new-born babies considerable variations in body temperature may be seen, as a full measure of nervous control would not have been established, and they cannot resist exposure to cold. A premature baby has got practically no control and so must be kept artificially warm in special boxes called incubators for several weeks. The production and the loss of heat depend also on the material of the clothing used which does or does not favour the loss of heat from the body. The fatty tissue of the body in obese people retards the heat loss.

The fever or rise of temperature of the body in disease is generally caused by a disintegration of the tissues of the body and it is an interference with the normal functioning of the mechanism of the human system. During fever the body is unable to equalise the production and loss of heat, and the febrile temperature is not due to an increased formation of heat in the body. This upset is rather a defence against the disease. In normal health the temperature remains constant and though some extra heat is produced in the body, there is loss of heat at the same time.

When a person wants to record the temperature of the body the thermometer is kept for a certain time either in the axilla or in the mouth. The temperature taken in the axilla is not always accurate. The temperature of the mouth also varies if a hot or cold drink is taken just before taking the temperature. It also varies if the nose is blocked. The temperature is ascertained by means of the clinical thermometer, which uses the Fahrenheit scale. Cheap clinical thermometers are liable to read false and may read a whole degree too high. Good and reliable clinical thermometers are available in the market, which alone should be used. Skin temperature is quickly and accurately measured with a thermo-couple connected with a galvanometer.

A thermocouple consists of two thick wires of copper and iron fused together. These two wires are connected with a sensitive galvanometer by copper wires. On placing the fused portion of the wires on the skin, there is a deflection in the galvanometer.

In children the temperature is usually higher than in the aged. In old persons the temperature may be subnormal, and as the circulation also becomes weaker, they find it difficult to accommodate themselves to extremes of cold or heat.

Definite and constant variations of temperature are found in females. The basal temperature chart is very instructive in the normal health of a female. During the time of menstruation, which lasts for 3 to 5 days, blood passes out freely from the capillaries of the uterus. The mucous membrane becomes dehydrated, the thickness is lessened. There is venous and capillary engorgement and the periodic hæmorrhage takes place. After this period the mucous membrane of the uterus thickens and comes to the normal condition. One of the most important functions of the ovary is the change produced in the menstrual cycle of women. Each month an ovum is discharged from the ovary. This process is known as ovulation and occurs between the thirteenth and seventeenth day after the first day of the menstrual period in women. The ovum survives only for a few days. The time of maximum fertility is therefore, within a few days on either side of ovulation. The temperature is at a minimum during menstruation. It rises slightly during the next 14 days and reaches its maximum in the premenstrual period. The difference between the minimum and the maximum temperature is about 1·3°F. Now if the daily basal temperature is routinely recorded, the time of ovulation can be predicted with accuracy. The day of ovulation is indicated by the sudden fall in temperature. From the point of view of birth control, this record will give them the safe period when sexual intercourse may be indulged in without fear of pregnancy.

Energy for the human system is derived from food, which is burnt with the production of heat. The unit of this heat is usually expressed in *calories.* This heat keeps the body warm, and is dissipated continuously from the body. It has been estimated that 40 calories of heat are given off from the surface of the body of a man every hour per square metre. The output of this energy is used to maintain the activity of the vital organs and is used to maintain the temperature of the body. This output of heat increases during the exposure of the body to cold, and decreases during exposure to heat. When the temperature of the body is raised in diseases, this output of energy is also increased and if the heat is not available from sufficient food, the body reserve is used up and the patient in convalescence becomes weak and emaciated.

"Teach a man and you teach one person;
Teach a woman and you teach the whole family".—(*Begum Liaquat Ali Khan*).

HAPPY PARENTHOOD

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CHILDLESS marriage is often the cause of much unhappiness and has often caused disruption of the family. Sterility in marriage is one of the most agonizing problems which can befall to the lot of a married couple. It was Ruskin, the great English critic and essayist of the nineteenth century, I believe, who said very pithily "Each sex has what the other has not; each completes the other and is completed by the other. They are in nothing alike and the happiness and perfection of both depend on each asking and receiving from the other what *the other only* can give." Such pre-eminently sensible and practical words of wisdom which have stood the test of time and which would be applicable for all time, were never uttered before or since. In domestic life, there must be harmony and a synchronisation of the ideals, aims and aspirations of both husband and wife. Psychology thus plays a very important role in domestic felicity. And domestic felicity is a condition precedent for an ideally happy married life. In ideal marriage there is a really wholesome union of the spirit and the flesh.

The consummation of a happy marriage manifests itself in the appearance at the proper time, within a year or two of the couple coming together, of a child. If this great and all-important event is delayed longer, the parents, particularly the woman starts first wondering, and then worrying. Further delay causes fretting, emotional upsets and ultimately despair in the woman. The husband does not get so readily or easily upset but with a depressing atmosphere at home caused by the unsatisfied yearnings of a loving wife who mopes and pines and ultimately even begins to nag in season and out of season, the husband also tends to get upset and the imbalance manifests itself in his altered behaviour and conduct towards the wife. If the couple happens to live with the husband's parents or his widowed mother or sister the position of the poor childless wife soon becomes intolerable, for on her devoted head is poured continually day in and day out, the vials of wrath of the supercilious widows. The poor wife is accused of being a "barren corpse" ("மலட்டுப் பிணம்") and every conscious minute of her existence, she has to keep listening to expressions like "ever since the advent of this Saturnine (சனியன்) into our house, there is no happiness for any one." "She is a barren wretch", "She comes of a sterile or wretched family in which there must have been barrenness, or in which some wicked woman must have committed infanticide" and so on. Bad luck, the will of divinity, the consequences of sin in this or in a previous birth—these are the best explanations human knowledge could and did offer till about 15 years ago.

Recent researches and studies on fertility conducted in Europe and America have greatly altered the outlook and provided ways and means of ascertaining the cause of infertility in man or of sterility in woman and remedying them in most cases. The only hope which people had some years ago in respect of these hapless and helpless victims of sterility, lay in offering prayers for divine assistance and blessings or in altering their mode of life, dietary etc. But today a more specific answer can be found to the question" why have this couple married five years ago, not been blessed yet with a baby ? Either or both the parents may be labouring under a disability that would account for the childlessness, sterility—for so it is called—caused by a variety of functional and structural disorders in either partner. Formerly only the poor "*She*", the "barren corpse" or the "Saturnine wretch" was considered the sole agent responsible for the childless state but fortunately for the poor Eve, science has come to her rescue and proved that the hitherto blameless "*he*" was also to blame and exclusively so in several cases. It is indeed a victory for the hitherto victimised woman to be thus partly or wholly exonerated and made to share the blame with her partner.

Dr. Raymond Pearl in the "*Natural History of Population*" has statistically assessed the average number of sexual meetings required to achieve pregnancy in a group of young recently married couples, to be two hundred and eighty eight. At this rate of two or three meetings a week usually practised by most couples, it would take about two years to achieve the result. Dr. Poitnoy in his most instructive and fascinating book published two years ago, states that, by and large most babies are conceived between the second and thirteenth month after the marriage. After the passing of the Sarada Act in India in 1930, the marriageable age of girls has been raised to fourteen—(post-puberty marriages have since become the rule) but prior to 1930, young immature girls between seven and ten years of age were married to suitable boys of twelve to sixteen. But they could and did come together in sexual meetings only after attaining puberty. And in the majority of cases in either of the two groups mentioned, pregnancy occurred within the first ten to fifteen months of the nuptials ceremony. There were then, fewer cases which remained sterile for three or four or even five years atter the nuptials in whom the same factors as now, must have operated.

"Men retain their normal creative powers, barring accident or disease well into the late years of life, but women suffer a slow but steady decrease in fertility. The peak of a woman's fertility occurs about her twenty-first to her twenty-fifth year, after which it tends to go down, especially so after she attains thirtyfive until her menopause which occurs usually between fortyfive and fifty, puts a final stop to her child-bearing power. So from the woman's point of view all unnecessary delays in the appearance of children should be promptly investigated in the light of modern knowledge.

In the case of the woman, infections of the genital tract, a turning or falling back of the womb from its normal position, the blocking of the mouth of the womb by a mucus plug, the blocking of the fallopian tubes which convey the ovum from the ovaries to the uterus or/and disease of the ovaries, may all be responsible for the failure of the male element to enter the womb and reach its destination, there to fertilise the ovum—the female element. Simple measures such as mechanical removal of the mucus plug or pumping air into the blocked tubes, have relieved the condition in many cases and resulted in the so-called barren women becoming pregnant within a few weeks after such treatment.

In the case of the male partner certain important and valuable researches conducted in Europe, England and America and recently applied in our own country, have revealed many extraordinarily interesting facts which were hitherto undiscovered. The following interesting findings are from a leading medical journal published in U.S.A. in March 1950.—"Fertility tests on the male seminal fluid were carried out and the total quantity ejaculated by the male, the total number of actively motile sperms in the total ejaculate, the size and shape of the sperms, the reduction in quantity and number on the second and subsequent days after one ejacuation, were all accurately estimated and studied by means of suitable tests. Three groups were classified according to fertility :—(1) Males with more than 185 million active sperms in the total ejaculate (which should be from 2½ to 4 c.c., roughly equivalent to half to one teaspoonful) were classed as *highly fertile* ; those with 83 to 185 million, as *relatively fertile* and men exhibiting less than 83 million active sperms in the total ejaculate as *sub-fertile*. The sperm counts of some men vary from time to time and this fact accounts for an occasional conception occurring among the third group also. The above classification is the best means of assessing the fertility of the male, short of his ability to produce a child. No man with a total active sperm count of less than 83 millions had been able to have children."

From a study of these interesting facts and other equally valuable researches on cognate matters relating to conjugal life, domestic felicity and happiness, we now know that, for childlessness woman alone is **not** to blame, that man can also be a contributing or accessory factor, that disorders and disparities are remediable and that sterility is not to be taken for granted and accepted with resignation but must be investigated properly in the light of modern scientific knowledge based on the result of extensive researches. Domestic happiness can thus be achieved by many couples of proper age who have hitherto despaired of bearing children.

Make it a rule never to be angry at anything a sickman says or does to you.—Dr. Benjamin Rush (1809).

How to Live Long and Happily

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HEALTH and longevity are materially influenced by the following essentially psychological factors :—

1. *Parentage* :—"Health begets health" and the robust mature seed produces sturdy seedlings. Parents should be of good physique and of robust health if they wish to bring forth healthy babies.

2. *Continence* :—The baser carnal passion should be wholly tabooed. Temperance and systematic regularity in food, drink and in sex matters should be practised for the maintenance of health. Intemperance in anything causes illness.

3. *Purity of the mind* :—A man with a pure mind is free from moral defilement, and he is not agitated by evil thoughts and deeds. His body and mind function undisturbed and so he enjoys health and happiness. The optimist holds that everything in nature is ordered for the best he always looks at the bright side of things. This is conducive to health and happiness. The pessimist feels ever worried and thus loses health and happiness. Man should learn to do his duties efficiently and well but always with a philosophical temperament. He should not be too much attached to any worldly thing. He should as it were, live like an eel which always moves in mud but the mud does not stick on to its body. Such a life alone will keep one always cheerful and healthy. A care-worn person is probably more prone to illness and loss of health while a care-free person enjoys better health and is more happy. Mental peace calms the nerves which in their turn keep the different systems of the body fit, and thus the vim and vigour of the body as well as the mental faculties are all maintained in equilibrium. The mind should be trained to preserve its equanimity under all conditions of stress and strain. If there is no peace of mind there is no health.

4. *Restriction in the use of drugs* :—Haphazard use of drugs may disturb the normal working of the different systems of the human body and may thus do harm to both the body and the mind. Hence medicines should be used only when actually necessary. The promiscuous and dangerous practice of drugging and self-medication is getting more and more rampant in our present day. Active and systematised habits of living conduce to the proper upkeep of both mental and physical vigour, also regulated exercises to the mind and body. Psychosomatic medicine is now fast taking the place of mere physical and therapeutic medication and rightly so too.

HINTS ON INFANT FEEDING

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THE importance of baby feeding as a foundation for the future well-being of the child cannot be over emphasized. Breast-feeding by a well nourished and healthy mothers is, without a doubt, the ideal source of nutrition for the growing infant. But where the mother's milk is not adequate or suitable artificial feeding has to be adopted. This serves to keep the infant supplied with suitable food and also enables the weak mother to revitalise herself so that, she may start feeding the baby with her own milk at a later stage. Mixed artificial and breast feeding in such cases, is superior to entire bottle feeding.

The vitamin content of the food is most important. Under-nourishment and deficiency in vitamins will lead to malnutrition, rickets and lower the child's resistance to infectious diseases. It is of the utmost importance that the mother should have plenty of rich nourishing food of the proper quality.

Artificial foods are reputed to contain malted farinaceous substances and so will be of value not as substitutes for, but only as addition to breast milk. Starchy foods such as sago, arrowroot etc. should not be given to infants before the fourth month, but may be given only after the 7th month, as supplement.

Fresh cow's milk is the next best to mother's milk, as it has nearly the same constituents as breast milk but in slightly different proportions. The protein content of human milk, is less than the cow's. The difference in the protein contents in the two milks can be overcome by diluting cow's milk with water though the proportion of soluble to insoluble protein cannot be altered thereby.

The dilution will necessarily reduce the fat and sugar in cow's milk and so we should add fat and sugar to the levels present in human milk.

A healthy child may be fed at intervals of four hours during the day and *never after ten in the night.* Overfeeding should be scrupulously avoided and the feed should be given warmed to body heat. Two or three teaspoonful of orange juice should be given daily after the first month. Where oranges are not available, lime juice with sugar, diluted with hot water may be given. Tomato juice (filtered through muslin) may also be given diluted with hot water and sugar added. Cod liver oil, five drops a day, beginning from the end of the first month serves as a very good preventive against rickets.

The daily calorie requirement of a healthy infant is 50 calories per lb. of body weight. 100 grammes of breast milk will yield 64 7 calories and cow's milk slightly more. Thus an infant weighing twelve pounds will need 600 calories a day which would be contained in 30 fluid ounces of cow's milk humanised with the addition of fat (cod liver oil) and glucose.

Heroes of Medical Experiments

NEARLY every medical advance begins in the laboratory, then proceeds to painstaking experiments on animals until most dangers have been recognized and removed. But there is always a chance that human reaction will differ. That is why scientists must call on volunteers to test the new discovery before it can be released for general use.

When the danger is particularly great, the scientist will usually not allow anyone but himself to take the risk. As examples :—

(1) Dr. Scott Smith at the University of Utah, underwent in 1944 a pioneering ordeal. He allowed himself to be injected with *curare*, a substance used by South American Indians on poisoned arrows. This drug causes paralysis Dr. Smith's throat muscles were the first to experience it and he could not swallow. He was nearly drowned in his own saliva (not a drop of which could get in). Finally his body became immobile and his lungs stopped working. Only his heart and brain remained active with the spark of life maintained by oxygen pumped into his system.

"It was like being buried alive," Dr. Smith later reported. But his frightening ordeal helped to prove controlled doses of drugs like curare can be used to relax the terrible spasms of poliomyelitis and epilepsy.

(2) A few years ago the armed forces asked scientists at the University of Illinois and the Medical Reese Research Foundation of U.S.A., to develop a vaccine for bacillary dysentery, a disease which had incapacitated several divisions in the Philippines during World War II. The team of research workers headed by Drs. Howard Shaughnessy and Sidney Levinson, came up with a vaccine all right—but it was so toxic that mice inoculated with it sometimes died in a few minutes. Would it have the same effect on humans ? There was only one way to find out : try it on themselves.

The twelve scientists composing the team, vaccinated one another with small doses of the vaccine.

If the toxin attacked the nervous system as it had in the mice, there would be a sharp drop of blood pressure, followed by a period of shock, and possibly an agonized, suffocating death. If the toxin went to the digestive tract, they would suffer acute cramps and high fever.

With the passing minutes the tension grew almost unbearable. Assistants held emergency hypodermics of adrenaline and sulphadiazine scanning each face anxiously for signs of trouble. The scientists just sat and waited. The first hour went by and perspiration stood out on their faces, as their arms began to swell painfully and their temperature rose. Midway in the third Dr. Shaughnessy spoke "I guess if this stuff were going to kill us, we would be dead by now." The experiments was over—and these brave men and women had proved that

the vaccine could be used on humans.

(3) The greastest mystery of malarial infection was solved by the work of an anonymous volunteer at the London School of Hygiene and Tropical Medicine in 1943. No one know where malarial parasites went in the human body between the bite of the mosquito and the appearance of the full grown malarial parasite. Monkeys bitten by mosquitoes died and parasites were found in their livers. The human guinea-pig at the London School allowed himself to be bitten and permitted an operation for the examination of his liver. Parasites were found and now research workers know very well where to aim their drugs.—(Bill Davidson in *Reader's Digest*, April 1953, condensed from *Collier's*).

Prince of Wails—(Not Wales)

Why is it that every one refers to a baby as a helpless little thing ? Give a baby a home of his own, and he is the least helpless object in it. All he needs to do, to have his every want filled is to let out one small peep (a short shrill cry). If help does not come at once, he need only extend this peep into a wail. And by forcing a bellow, he can throw the entire house-hold into a bewildered tail-spin from which it may not emerge for days.

He can't walk, he can't talk, he can't feed or bathe himself, and in that he has an unmixed blessing. Unable to walk, he can lie in bed all day and kick his legs—the envy of every adult who sees him. Unable to talk, he need never answer unnecessary questions, become involved in a political argument, or politely tolerate a bore. When oppressed by the last, he can turn his head the other way, yawn, or blandly go to sleep, and have his actions approved by polite society.

He need never worry over what he is going to wear today or what he will eat for lunch. If he doesn't wear a stitch, he is perfectly content, and no one will raise an eye-brow. If he doesn't like his food, he can spit, blow, or bubble it out, no matter who is watching, or he can disdain to eat at all. He can emit at the end of a meal, a resounding belch, and be applauded for what two years later, will be considered most unseemly.

Soon the world at large will criticise the way his hair grows, although now his admirers are enchanted because it grows at all. It will criticise the way he eats, although, now all are ecstatic if he gets it down any way. If he turns out to be beautiful, good, rich or successful, part of the world will envy him, and if he turns out to be ugly, mean, poor or a failure, the other part of the world will berate him, but now, for the last time in his life, he is eulogized by poets, chucked under the chin by old ladies, cooed at by scrooges, and adored by all.

Far from being helpless in this world, he is the only human being who can chin on it. It wasn't idle conversation that prompted a pædiatrician to muse, "In the next life I'm going to be a perpetual baby".—(*Chicago Tribune*).

The whole secret of life is to be interested in one thing profoundly and in a thousand things well.—Hung Walpole.

Tobacco and Cancer

By a Doctor

"TOBACCO has been incriminated as the vehicle conveying an agent responsible for a large proportion of the cases of cancer of the lung."—(Editorial in the *British Medical Journal*, December 13, 1952).

About two years ago *Good Health* drew attention to an interim report of research by Dr. Doll and Professor Bradford Hill, under the auspices of the British Medical Research Council, into the alarming increase in the number of deaths from cancer of the lung. At the point they had come to the conclusion that "smoking is a factor, and an important factor, in the production of cancer of the lung."

Since that time research has continued, and a further report has now been published; the investigation is being conducted with the greatest care, so that the findings may give a true picture of the facts. Collateral information has been secured on the effcts of such questionable factors as pipes *versus* cigarettes; the use of petrol lighters by smokers; residence close to gasworks, methods of domestic heating, places of residence, and previous history of respiratory diseases. Thus far, a total of 1,488 lung cancer cases have been investigated, in various parts of England.

Summarizing the report, the editorial in the *British Medical Journal* estimates that if "the annual total of deaths of men from lung cancer is taken as 11,000... about 1,100 deaths of men would be due to causes other than tobacco, compared with 10,000 attributable to tobacco."

"Where do we go from here?" asks the *British Medical Journal.* It then proceeds to suggest that "intensive research on the chemical constituents of tobacco and of tobacco smoke is now needed, and it is surely incumbent upon the tobacco manufacturers to do this."

Why fiddle about like that? For in the face of such convincing evidence as these scientists have produced, the *real question* that every sensible person should ask is: "*Why continue to smoke*?"

Of course, we shall be told that the national revenue is inextricably bound up with the duty payable on tobacco; but what a topsy turvy argument that is. With the total home consumption of tobacco for the year ended March 31, 1951, at 221·2 million pounds and with duty payable on it at £2 18s. 2d. a pound, the smokers, perhaps ninety-five per cent of the population of relevant ages, collectively impoverished themselves in 1951 to the extent of £643,323,500 for duty alone. The government was therefore, enabled to subsidize the national food bill up to a ceiling of £450,000,000 leaving itself about £200,000,000 for free wigs and other items of the health service budget for the poor and needy—the self-impoverished!

What about the disorganization of the capital invested in the tobacco trade ? At least the land and the labour could be directed to the growing and processing of food. We hear much of the progressive shortage of arable land, and of the steady approach of the point at which there will not be enough space to grow the food necessary to maintain the world's ever-increasing population. Yet seemingly we are content to watch vast tracts of the finest arable land being wasted to produce something which definitely causes cancer and kills—TOBACCO !.

The *British Medical Journal* adds: "In the meantime, the younger generation will have to decide each for himself or herself whether the additional risk of contracting lung carcinoma is worth taking." Quite true, but can we not help them ? We withhold car-driving licences till the age of eighteen ; are we powerless to withhold tobacco ?

And the older generation, is it to be dismissed as so lacking in will power that we must regard it as hopelessly enslaved by this menace ? Come, come !

One very interesting point about these statistics is that the lung cancer deaths among men are at present about five and a half times greater than similar deaths among women. Having studied the evidence though, the editorial writer quoted states : "This seems to dispose of the idea that there is a sex-difference in susceptibility to lung cancer, the large excess of male mortality being explicable by the greater use of tobacco among men." That is to say, if smoking continues to increase among women, so in due time, it is to be expected, will the number of deaths of women from lung cancer.

If we are really interested in building a happier, healthier nation let us work steadily for the elimination of the menace of tobacco smoking.—(From *Good Health*, London, March '53).

Note :—[And we in India should likewise adopt stringent methods to eliminate this rapidly growing menace to the younger generation.–Ed. HEALTH.]

Height Hazards—Tall Men at a Discount

Every inch a man grows over six feet today, is a handicap instead of a help, uuless he is a basketball player or a traffic policemen. The tall man finds he is something of a misfit in a civilization tailored to people of smaller size. He bangs his head getting in and out of motor cars, he can't sleep in a regulation size 74-inch bed, he finds it hard to buy a suit off the rack, and when he sits on a standard living room chair—which is 18 inches off the floor—his chin bumps his knees everytime he opens his mouth to say something. That is one reason why tall men aren't talkative. In a crowded world he simply takes up too much space. No ordinary man or woman will sit behind him in a movie or at a prize fight without grumbling loud enough for the complaint to reach his ears, and if he lives in a boarding house the other roomers resent his reach at the table. As a result of these physical discomforts and the steady criticism of smaller folk, many a tall man gets an inferiority complex. Far from taking advantage of his size, he is more likely to submit to public insults and ridicule than a sub-five-footer.— —Hal Boyle, *in Ann. Arbor News*, December 2, 1952.—Quoted in *Indust. Med. Surgesy*, Jan. 1953.

THE CLOCK INSIDE OUR BRAINS

JOHN E. GIBSON

WHAT makes time pass slowly on some occasions and swiftly on others? Mental time—the time we feel by—is not measured by mechanical clocks but by a sensitive physiological clock in the time-measuring centres of our brain. This clock is motivated by our metabolic activity and regulated by the biochemistry of our emotions. When it runs fast it will make minutes seem hours and when slow it can telescope minutes into seconds.

Some individuals' mental clocks run consistently always slow and these persons are always being surprised to find that it is later than they think; they are habitually late for appointments For them mechanical time runs so fast that they never can quite catch up with it. There are others whose internal clocks run fast; for them time seems to creep so slowly that fifteen minutes seem like sixty. Make an appointment with one of them and the odds are that he will be there ahead of time.

Some people have mental timepieces which seem quite synchronized with the clock on the wall. They can usually guess the time of day within ten minutes. Experiments at a leading University showed about 50% of the subjects tested had such an accurate time sense that they could awaken from sleep at a previously designated hour. But even these human clocks tend to run fast or slow occasionally.

Our mental clocks are affected, for example, by changes in body temperature. Dr. Hudson Hoagland, noted biologist, discovered that when we become overheated, time seems to pass slowly; with a high fever, it has a snail-like pace. Conversely, when the body-temperature drops to subnormal levels, time whizzes by.

Successful effort makes time fly. Tests at the Washington University showed that time passed almost one-third faster for stenographers, book-keepers and accountants when they were busily at work, than when they were sitting at their desks doing nothing.

All states of mind have a bearing on our estimate of time. Studies conducted at the Arizona State College of Medicine have shown that attitudes of confidence and optimism make time move at an accelerated pace, while feelings of doubt and anxiety slow it down. The more "down in the dumps" (dispirited and depressed) we feel the more slowly time drags by.

If we find time dragging and wish to speed it up, a cup of coffee or tea will do the trick. Liquor has a double barrelled effect on the time-sense. It makes short intervals of time fly; 45 minutes can seem to be only fifteen. But for longer periods alcohol makes time appear to pass much more slowly. A series of tests conducted by the celebrated German Scientist Othmar Sterzinger of the Graz University show that for

most people alcohol waits only about 20 minutes to do its abrupt about-face. Liquor can scarcely be recommended as a means of giving time a "shot in the arm".

How fast time passes for us is also determined to a large extent by our age. When we are young —during childhood and adolescence-mechanical time crawls. It marches with steadily increasing swiftness with each passing year, until, as old age approaches it really rushes past. Exhaustive studies by the French Scientist, Pieree Lecomte du Nouy indicates that in the course of one hour, a child lives physically and psychologically as much as a man of 60 lives in five hours. Therefore, it is not surprising that it is difficult to sustain the attention of a child for more than a few minutes; to him ten minutes take as long to pass as 50 minutes for the older man.

The evidence makes it clear that the time we really live by, is not mechanical time but time as it is measured by the *clocks inside our brains.*—(From *This Week*, condensed for *Reader's Digest*, April 1953).

Niacin (Nicotinic Acid) for Dysmenorrhea (Painful Menstruation)

Niacin (100 mg.), given twice daily and every 3 hours during cramps, was administered by Dr A. P. Hudgins, of Charleston, West Virginia, to 111 women complaining of severe menstrual cramps. Forty were followed for 6 months and the effect of niacin determined. Thirty-five of the 40 obtained satisfactory results. These findings are presented as a preliminary study which appears to offer encouraging results with the difficult problem of dysmenorrhea. (*Am. Pract.*, November 1952).

Also utilized were the accepted principles for correcting dietary and vitamin deficiencies: 1. *High protein*, adequate calories, vitamin and mineral-rich diet. (Diet included 1 quart of milk daily). 2. *Multiple, full vitamin* and mineral supplement in therapeutic doses 2 to 10 times the usual recommended daily allowance, to assure effect and utilization of the high dosage of special vitamin (niacin) 3. *Prolonged therapy*, which is required for real dietary correction.

All of the patients studied and reported had menstrual cramps which were disabling. They had to stop work and, in some cases, cramps were severe enough to put the patient to bed. Before beginning the medication, it was carefully explained that flushing, chiefly of the head, neck and upper chest, would probably occur within 10 or 15 minutes—and last for about the same time. The patient was told that this was a desirable effect in the pelvic organs—and that the skin discomfort could usually be minimized. if the tablets were taken *after food* Other possible reactions are headache, nausea, disagreeable taste and smell. None of these, except the flushing, were reported in this group. Only 2 of the 111 patients stopped the medication due to the flushing. It was an interesting observation that the patients who complained about the flushing between menses on 100 mg. twice daily could frequently take 100 mg. to 200 mg. or more, every 2 or 3 hours during "cramping time" (menses) without discomfort. Also, that the failures (no relief of cramps) frequently reported no flushing. This may indicate the need for increased dosage or further study in the utilization of the niacin in these cases —(*Current Medical Digest*, Feb. 1953).

A New York teacher annoyed with his clock-watching students covered the clock with a cardboard on which he lettered—*Time Will Pass. Will you?*

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Pleasant Topics from Periodicals

Ulcers and Emotions

Ulcers, stomach and duodenal, are four times as numerous among men as among women Excessive smoking is given as one reason for this difference. Three psychologists of the University of Cincinnati studied the cases of twenty six females afflicted with this trouble. They ranged in age from ten to sixty years. Each of them was either motherless or had felt rejected or neglected by her mother. Apparently men are better able to stand the effects of such family patterns.—(*Good Health*, 87:11)

●

Abuses of Cortisone and ACTH

Although the usefulness and hazards of these two drugs have not been finally determined, there is strong clinical and experimental evidence that some conditions are adversely affected by these hormones. Among these contra-indications are (1) the presence of peptic ulcer (2) tuberculosis (3) emotional upsets Dr Salassa of Minnesota strongly advises against the use of these hormones in all undiagnosed illnesses, not only because they may turn out to be contraindicated, but also because they suppress certain symptoms, making correct diagnosis difficult. The emotional status of the patient, present and past, gastrointestinal complaints and disturbances should be ascertained and evaluated before embarking on a programme of therapy with cortisone or ACTH. —(*N. Y State J. Med.*, 1st Feb 1953).

●

Mother of Notable Vegetarians Celebrates Hundredth Birthday

On January 24, 1953, Mrs. Edith M Freeman celebrated her hundredth birthday at her home at St. Ives, Cornwall.

Mrs. Freeman is the mother of Mr Peter Freeman, M.P, who will be well-known to many readers of HEALTH FOR ALL as the Past President of the Vegetarian Society and champion of the vegetarian and health freedom causes in the House of Commons.

Mrs Freeman's nine children include two other vegetarians in Mr. Arnold Freeman, M A., B Litt (Oxon), author and lecturer, and Dr. Ada M Dansie, M B, B.Sc, F.R C S, M R.C P., who was medical consultant to the late George Bernard Shaw for many years prior to his death, while her third son, the late Sir Ralph Freeman, M. Inst. C E., became famous as the designer of Sydney Harbour Bridge and Victoria Falls Bridge, besides being concerned in the design and construction of the Festival of Britain, South Bank Exhibition

Mrs. Freeman herself is not a strict vegetarian, but she follows a very frugal and abstemious regimen, and takes no red meat She enjoys good health, and spends much of her time letter-writing or, knitting birthday presents for her one hundred descendants!

Among the many messages which Mrs. Freeman received on her birthday was a telegram of congratulations from H.M the Queen —(*Health for All*, March, 1953).

●

Backyard Gossip

She had been sitting on the damp grass with her boy friend—now she is in bed with "romantic" *(for rheumatic)* fever.

* * *

Indignant letter from expectant mother

"What did the Doctor mean when he told the midwife to let him know when my "brains" (for *membranes*) ruptured? Does he think I am going mental or something, just because I am going to have a baby?"

* * *

Notice in Optician's Window

Headaches? Let us examine your eyes and help remove same.

* * *

Young Female Patient to Dentist

"Well actually, I have two false ones at the front" —(*Univ. Durham Med. Graz.*, March 1953).

* * *

Dr Charlie Weiler said he was always puzzled as a student in physics about the indestructibility of matter until the professor wrote three lines on the black-board:—

The man ate the cream
And died
Then they cremate the man!

* * *

Woman to Banker

I would like to open a joint account with someone who has money.—(*Look around*)

* * *

The Writing Public

A contributor who sent a joke to the digest added this postscript. "If it is no good, don't bother sending me a dejection slip".

* * *

Advice to the Young

Whenever you are asked if you can do a job tell them "Certainly I can". Then get busy and find out how to do it.—*President Roosevelt.*

* * *

The only man who behaves sensibly is my tailor; he takes my measurement anew every time he sees me, while all the rest go on with their old measurements (estimates of me) and expect them to fit me for all time—George Bernard Shaw in *Man and Superman.*

* * *

Like mother like daughter

Mrs. Barbara Leslie, who has been a nurse in University College Hospital, London was delivered of a baby daughter in the Obstetric Hospital in December 1952: To her great surprise she discovered that by the merest chance she was lying in the very same bed that her mother occupied when Mrs. Barbara Leslie was born in 1929!—(*Univ. Coll. Hosp. Mag.*).

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Wounds,
Bites,
Snake-Bite,
Bruises,
Strains and Rupture of Muscles,
Poisoning,
Insensibility,
etc., etc.

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